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Combat Crew

strategic air command

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FEBRUARY 1977

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Combat Crew

Magazine of the Strategic Air Command - 27th Year of Publication

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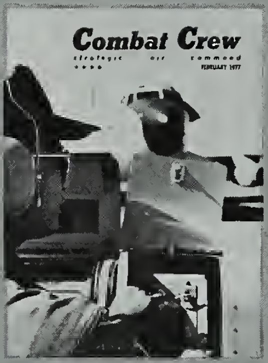

ON OUR COVER

SSgt Amoor Mandap, 916th Maintenance Man, is representative of all hard-working and dedicated personnel of SAC's 916th Air Refueling Squadron who are featured in this month's issue of Combat Crew. For more on this story see pages 4 and 16. (Photo by A1C Michael Wein)

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COMBAT CREW is an internal publication of the Strageic Air Command with the sole purpose of promoting safety. The contents of this magazine are informative and not to be considered as directive in nature. Facts, testimony and conclusions of all accidents printed herein may not be construed as incrimination under Article 31 of the Uniform Code of Military Justice. All names, dates and places used in conjunction with accident stories are fictitous. Written permission must be obtained from Headquarters, Strategic Air Command, before any material may be reprinted by other than U.S. Air Force organizations. Use of funds for printing this publication has been approved by Hq. USAF. Contributions are encouraged, as well as comments and criticisms. Direct correspondence with the Editor is authorized. Address correspondence to Editor, COMBAT CREW, Hq. SAC (DOSE), Offutt AFB, Ne. 68113.

Major General E. S. Harris, Jr.
Chief of Staff, Strategic Air Command

Recently I met an old acquaintance and we reminisced comfortably about "the good ol' days" when we flew B-50s, B-47s and KC-97s. As we talked, I was amazed at how well we could recall in detail the big missions, the big successes, the close calls, the wry jokes and the close friendships we shared way back when we were aspiring SAC crewmembers. Naturally, we didn't recall the drudgeries, the bag drags or the things that lacked success. Instead, we remembered the good things and our past associations were very important to us because we shared a common experience — pride in our mission and how well we performed it. We had a job to do, we did it, had fun doing it — or at least we remember it as being fun — and that made it the "good ol' days."

I don't mean to impose my memories on those who weren't there, and by no means am I saying that **my** "good ol' days" are blueprints for **your** "good ol' days" . . . that can't be. However, I am concerned because I sometimes sense a lack of "full involvement" or commitment within our crew force today. This could result in some of our air and missile crewmembers letting the days of crew duty pass without appreciating them for what they are. Crew duty is perhaps one of the most

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What Happened to the . . . "Good Ol' Days"

important experiences you'll ever have. It can set your pattern of living, your work ethic, your moral standards, your friendships — the things on which the rest of your life may be based. It is a time for doing your job right, and gaining professional respect and confidence. But it can also be a time for other important things in your life.

The ingredients and procedures surrounding crew duty are different today from what they were a number of years ago, or as they are depicted in the movies or on television. The advent of nuclear weapons has inhibited us from being unduly carefree or rowdy. Our professional dedication for doing things properly, and the sophistication of electronic advancements, have made the entire mission one that demands "serious mindedness" as opposed to the cavalier depictions of earlier times. However, serious professionalism does not and should not exclude fun, friendships, openheartedness, unselfishness, good manners, cooperativeness, and cheerful attitudes. These are the qualities that will lay the foundation for your memories of early service.

I have my "good ol' days." Your time is now. If you aren't having fun, in the good sense of the word, while you're a crewmember, then something's not right. Enjoyment of the job can't be conjured or regulated by the Air Force, because it comes from within each individual. The enjoyment comes from throwing yourself fully into the opportunities you have. Live for your job, companions, unit, and family. Also, don't take for granted your present Air Force associations. I believe that the Air Force has always been and will continue to be comprised of people who truly represent the best of what America is and should be.

If I may quote Martial's *Epigrams*, "To be able to enjoy one's past life is to live twice." Build your "good ol' days" **now** . . . before it's too late. ★★

SAC's 916th and....

Seventeen Years

A frequent argument against being too safety conscious is: "Safety gets in the way of our mission accomplishment."

That's certainly not true of the 916th Air Refueling Squadron, Travis AFB, California. Their record indicates throughout its 17-year history the 916th has never been charged with an aircraft accident. Yet, that same SAC unit has an enviable record of notable accomplishments, many of which are real firsts.

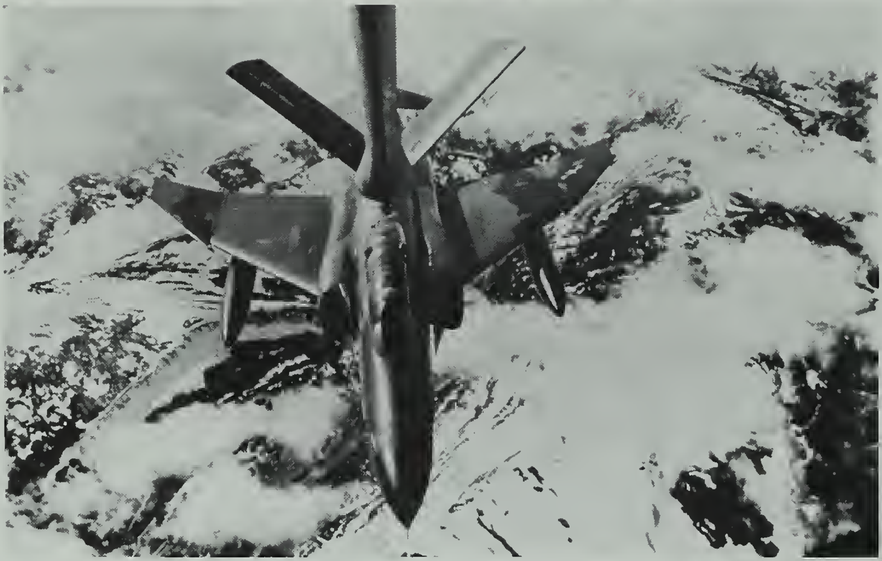
# of Flying Safety

The 916th was activated in 1959 at Travis AFB as part of the 5th Bomb Wing. That wing gave the 916th a good start in flying safety. The 5th was first spotlighted in *Combat Crew* in 1963 for never having had an aircraft accident during its nine-year history as a bombardment unit.

The members of the 916th picked up the tradition of aircraft safety but did not allow it to interfere with their mission accomplishment. In 1964, two 916th crews set an unofficial speed record on a redeployment mission from Yokota AB, Japan, to Travis. Their record was eight hours and six minutes, an overall ground speed of 640 miles per hours. With this flight, the 916th opened the eyes of the world to the magnitude of the truly global capabilities of the KC-135.

In December of that same year, the 916th retired the Colonel Frank Ellis trophy by winning the award for the third straight year. This trophy was annually awarded to the best tanker squadron in the 15th Air Force.

Then, in 1966, the 916th was selected to participate in Operation



Thirsty Camel. The objective of this operation was the first aerial refueling of an Air Defense Command interceptor. The crews underwent an intense training program with the modified F-102 interceptors of the 82d Fighter Interceptor Squadron, then stationed at Travis. Later that year, when the 82d deployed to Naha AB, Okinawa, the 916th was ready to deliver the necessary refuelings. Throughout both the training and operational phases, safety was never compromised and the mission was accomplished successfully.

The next year, the 916th was again honored with a first; the first night aerial refueling with the new swing-wing F-111 fighter. A similar first was recorded in 1969 with the first air refueling of an Air Force A-7D fighter. The crews involved in the program used their experience to help write the A-7D refueling technical order. 1969 was also the year the 5th Bomb Wing was reorganized and relocated at Minot AFB, leaving the 916th at Travis as a dispersed air refueling squadron reporting directly to the 14th Air Division.

During the Southeast Asian conflict, most tanker units either deployed as a unit to Southeast Asia or kept a majority of their crews and aircraft TDY there. But the 916th had an additional role. Sure many Travis crews participated in Operation Young Tiger, Bullet Shot, and Linebacker, but the unit was mainly occupied with Operation Arclite. This was the nickname of the operational deployment and redeployment of B-52s to and from Southeast Asia. Travis crews were the last to tell them goodbye and the first to say "Welcome back, and thanks."

Photos provided by 916th Crew R-108, A1C Michael Wein, SrA Judy Szymanski, and TSgt Charles Legg.

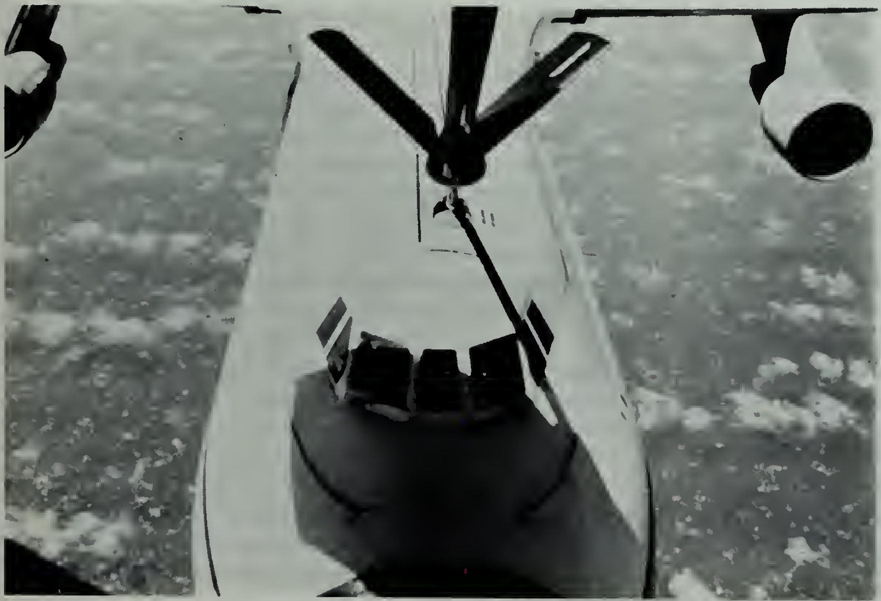
During the Southeast Asia conflict, the 916th crews flew 720 of these Arclite missions, totaling 3086 flying hours and 43,200,000 pounds of fuel. This represents three percent of the unit's 17-year total flying time. A six-year, 3000-hour operation like this could not have been successful without aggressive, professional airmanship, consistently superior maintenance, and effective supervison. Virtually all missions were successfully accomplished. Yet, through it all, there was not a single aircraft accident. Not one.

The efforts of the 916th during this period were so superior that the unit was twice awarded the Air Force Outstanding Unit Award for periods covering three out of four years (1971 through 1972 and 1973 through 1975).

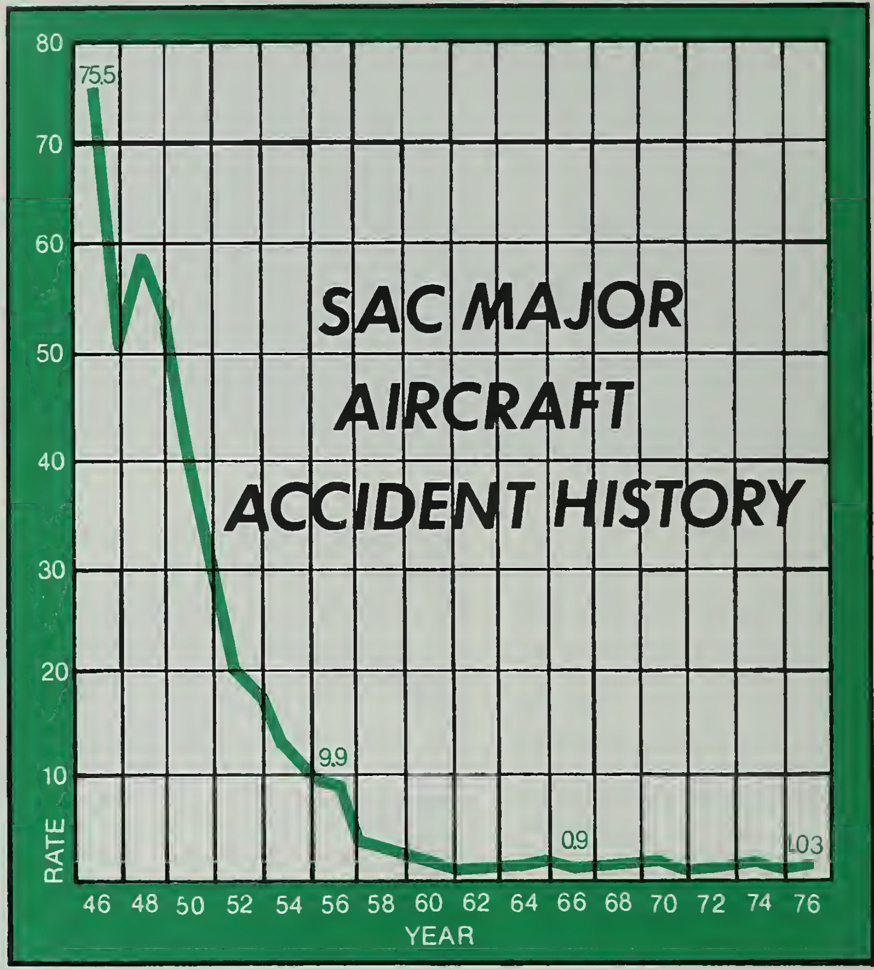
In 1974 yet another first was credited to the 916th; the first overwater, long-range C-5 air refueling. Four months later the thirsty giants had onloaded a million pounds of fuel without so much as an incident. This same year, a 916th crew was selected as the recipient of the Major General Charles M. Eisenhart Air Refueling Crew of the Year Award.

In recent years, the most frequent training mission receiver for the 916th crews has been the Beale AFB bombers. With the deactivation of that unit, the 916th has shifted primarily to fighter aircraft refuelings. The unit also frequently supports the B-1 development program and is among the first to refuel the new A-10 ground support aircraft. With a C-5 unit colocated at Travis AFB, the 916th crews are often tasked to support important higher headquarters C-5 operational missions on short notice. Today, the 916th Air Refueling Squadron is the prime provider of west coast C-5 refuelings.

Obviously, when you look at the long and proud history of the unit, you know the 916th Air Refueling Squadron has been counted upon time and time again to successfully complete any task assigned and to do it safely. This impressive record of aviation and refueling firsts could not have been accomplished with a "Can't-do" attitude. The motto of the squadron is "Proficiency attained and maintained;" perhaps we should add "safely."



For more on the 916th see page 16



WHAT WILL IT TAKE?

Colonel Jesse S. Hocker
SAC Director of Safety

It was only a month ago when we closed the record books on 1976. The opportunities as well as the mistakes of that year will no longer present themselves. We are now facing the responsibility and challenge of a new year. From the standpoint of safety, our responsibility is to conserve valuable national resources and our challenge is to continue to operate new as well as existing weapon systems in as safe a manner as possible.

Few recall that in 1946 our major aircraft accident rate was 75.5 accidents per 100,000 flying hours. Over the years, and through a great deal of effort, we have driven that rate down to 1.03 in 1976.

In a message to the command in January, General Dougherty noted that in 1976 we had no major aircraft accidents in the B-52 program. Last year was the first year since 1955 that we achieved such success in the heavy bomber program.

Last year, we had more than one major aircraft accident that resulted from crew distraction in the cockpit. To counter this threat, we have identified and taken action on several problems in the area of cockpit distraction through the Critical Eleven Minutes Program. Although cockpit distractions will continue there has been a substantial reduction in the potential for an accident caused by this factor.

The 1976 SAC missile safety record is the best in recent years. All categories of missile mishaps were reduced below the previous three years. In addition, the percentage of personnel error caused mishaps decreased significantly.

During the past 30 years, we have made tremendous gains in accident prevention. Some may feel that we have now reached the lower limit in our accident rates; a limit below which further significant reduction is unobtainable. I believe we

> ***"During the past 30 years, we have made tremendous gains in accident prevention . . . but I am also convinced that we have the capability to make even greater progress in this critical area — as evidenced by last year's zero accident rate in the B-52 program."***

have reached a barrier, but I am also convinced that we have the capability to make even greater progress in this critical area — as evidenced by last year's zero accident rate in the B-52 program.

A key to further reduction of our accident rates is for every crewmember, commander and supervisor to understand and be constantly aware of human limitations and capabilities. Once this is done we must take decisive action to prevent the accident sequence from ever starting. Each day in SAC we do succeed in preventing hundreds and perhaps thousands of potentional accident sequences from starting. We must expand this kind of accident prevention to all of our activities if we are to continue to reduce accidents.

We certainly have the potential to continue our progress in all areas of accident prevention. We have the right crews. We have the right people in maintenance, the training programs and supervisors that can accomplish the goal of progress. To achieve this goal will take a lot more.

What will it take? It will take an absolute maximum effort on the part of every person. When the crewmember is planning a mission or flying an approach, he will have to do it with more accuracy than he has ever done before. When the missilier is monitoring status he will have to be even more diligent than he has been in the past. When the maintenance man is performing a task, that task will have to be done better than it has ever been done. The supervision that commanders and supervisors offer will have to be the very best that has ever existed.

Yes, we have the potential to continue our progress in reducing accidents, but like a winning football team, we will have to put it all together.

A DAY IN THE LIFE OF FOXTROT

Captain Gregory J. Anderson
310ARS, Plattsburgh AFB

"Foxtrot, Jazz three-six. Radar's in standby, you're cleared in."

"Roger."

"Three-six, Foxtrot. You look good, have a good flight."

Jazz three-six might be a B-52, KC-135 or FB-111. Foxtrot is the supervisor of flying, or SOF. Before takeoff from any SAC base, those few terse radio transmissions mean that the aircraft has passed a careful safety inspection by the SOF and is properly configured for takeoff. On a normal flight the aircrew may have no more direct communication with the SOF for the entire mission. But he is there, and the importance of his various duties often goes unnoticed. I spent a day with the SOF at Plattsburgh AFB, and I gained a new appreciation of the importance of his position in SAC's flying operations.

The men who pull SOF duty are highly experienced SAC pilots. They include squadron commanders, operations officers and instructor pilots. I was fortunate to be able to observe Lt Col Jack Wilkinson, an FB-111 pilot who has pulled SOF at Plattsburgh for two years, and before that since 1967.

About two hours before the first aircrew arrives at their aircraft in the darkness of early morning, the SOF comes on duty. After reviewing pertinent regulations and the previous SOF report, he gets a briefing from the unit command post controller on changes to the daily flying schedule. At base operations he checks the status of airdrome facilities and updates information from current **Notices to Airmen.** He receives a weather briefing covering present and forecast conditions in the local area, and also conditions affecting routes, air refueling tracks, destinations and possible alternate destinations for all missions planned that day.

Time permitting, after a quick coffee to help him digest all that information, he goes to the SOF vehicle, which will be his home for the duration of his 12-hour duty period. The vehicle is equipped with a UHF radio, and the SOF also carries an FM handheld radio, a set of applicable regulations and a set of binoculars.

From the moment he climbs in his vehicle, the SOF's duties are indescribably varied, depending on that day's flying schedule and all the factors which influence it. A typical winter morning might find the SOF dodging snowplows as he directs snow removal operations, while on a typical summer morning he might be chasing birds off the runway and taxiways.

The day I rode with Lt Col Wilkinson, no hazardous weather was forecast during the entire 12-hour period for anywhere our planes were scheduled to fly. Lt Col Wilkinson explained that under different circumstances (i.e., normally!), he would periodically update the weather situation as required, especially when thunderstorms threatened the local area. Many times the SOF is the aircrews' best source of information on the location and movement of storms in the immediate vicinity of the base.

Fortunately, it was beautifully clear and cool, and the visibility was greater than 40 miles. However, when one possible difficulty is removed, the SOF usually has two more to take its place. We turned our attention to problems encountered by two FB-111's scheduled to take off in cell formation. One had a hydraulic problem, and the other had a fuel leak. The SOF helped coordinate maintenance activities, even chasing down a fire truck to wash down the fuel which had leaked onto the ramp.

Coordinating with maintenance on their activities helps the SOF in his efforts to achieve maximum utilization of aircraft resources and allocated flying time. The printed flying schedule is the most important piece of paper in the SOF vehicle. Each SOF has his own written language of X's, arrows and numbers to make notes on the schedule so he knows the whereabouts of each aircraft at any given time.

The schedule began to fill up with notes, and we became busier as succeeding airplanes were preflighted, taxied and launched. Among the SOF's pre-launch activities is the all important "last chance" inspection which is conducted on the hammerhead just prior to takeoff. This inspection is much more than a brief visual check of the exterior of the aircraft. Specific attention is given to flight controls, flap and spoiler position, engines, fuel or hydraulic leaks, gear struts, tires, brakes, weapons bay doors, exterior lights, panels and hatches, and the inspection also insures that all pitot covers, static wires and safety locks have been removed. In other words, there is a lot to look for, and in one case, Lt Col Wilkinson was down on his hands and knees in order to closely inspect a minor leak.

An experienced SOF has a good general knowledge of all SAC aircraft assigned to his base. However, when questions of a technical nature arise which concern the aircraft he is not currently qualified in, he defers to instructor pilots reachable by telephone. "Besides, I think only a little bit of knowledge could be dangerous," Lt Col Wilkinson added. "You ought to know it or stay out of it."

Whenever possible, after completing the last chance inspection, we drove to a prominent position beside the runway to observe the takeoff. From our vantage point, the SOF was ready to render assistance if necessary.

The SOF is responsible for insuring that safe and efficient flying practices are observed at all times, and he should intervene in some instances to prevent hazardous situations from occurring. In an actual emergency situation, the SOF could immediately initiate a conference over his FM radio, which would bring in the wing commander, deputy commander for operations, duty IP, command post, maintenance control, approach control, tower and the fire department.

The SOF is an extension of the wing commander and the DCO, and as such, is the designated responsible authority until they arrive on the scene. But the SOF has no direct command authority. Lt Col Wilkinson explained it this way: "We may offer suggestions, but our job is really to control the situation, the SOF should also be monitoring the fuel and maintenance status of other aircraft in the traffic pattern.

He also pointed out that someone must keep track of other aircraft when an emergency commands the attention of the various base agencies. So while he is closely involved in the emergency situation, the SOF should also monitoring the fuel and maintenance status of other aircraft in the traffic pattern.

Most of our last few hours were spent observing approaches and insuring the aircraft were properly configured for landing. Around 1500 hours we headed to the command post, where the next SOF was waiting for the vehicle to begin his tour of duty. His tour would end after the last airplane was safely tucked into its parking spot.

On the way, I learned of still other possible SOF duties, such as figuring crosswinds, monitoring the chill factor, taking runway surface condition readings, and even counting runway lights from the runway threshold for conversion to RVV readings when the runway visual range reading was doubtful. During an alert exercise or EWO situation, the SOF provides assistance for the safe ground movement of aircraft, as well as a possible alternate source for message broadcasts.

During the time spent with Lt Col Wilkinson, I learned that the SOF is the primary coordinator of all operational flying activities. Whether the action is dull and dreary or fast and furious, he is in the center of it. So if you're a crewmember like me who might think that the SOF has a soft job, think again. He often works harder and usually longer than the aircrews, and he is there to help YOU.

SAFETY-GRAMS

IMPROVED PILOT WEATHER REPORT FORMAT

A new, improved pilot weather report (PIREP) format was recently instituted in the United States. The new format replaced the old "free form" PIREP format used for many years. The new PIREP format standardizes the sequence in which weather elements reported by pilots are transmitted to base weather stations and centralized forecast units. The standardized sequence follows:

/OV	Location (Position, Time, Altitude)
/TP	Type Aircraft
/SK	Sky (Cloud Bases, Coverage, Tops)
/TA	Outside Air Temperature
/WV	Wind Velocity (Direction, Speed)
/TB	Turbulence (Intensity, Type, Altitude)
/IC	Icing (Intensity, Type, Altitude)
/RM	Remarks

Crews can continue to report weather conditions observed in flight without regard to the new format. Crews will most likely see the new weather report information on the teletype sequence report in the weather shop. The only difference you will notice is that meteorologists will request that you report location of observed weather elements with respect to navigation aids such as TACANs, VORTACs, VORs, or TVORs.

-135 STRUCTURAL MODIFICATION

SAC KC-135s will have a near tripled life expectancy after structural modification of their wings under a program now in progress.

The modification involves replacing about 1500 square feet of underside wing structure with an aluminum alloy used on commercial aircraft. The modification is expected to add 27,000 more flying hours to the wings. The original design-life of the KC-135 is 13,500 flying hours.

Six -135s have received the alloy wing since December 1975. Eventually, SAC plans to modify its entire force of about 600 tankers.

The alloy is a tougher and more durable material than that used in original construction. The modification also permits structural improvements to be made to the wing design.

EC-135s and RC-135s are also being programmed into the modification program.

CUSTOM MADE NOMEX

A recent TAC accident revealed that many aircrews and supply managers were not aware of the procedures to requisition custom-fitted Nomex flight suits.

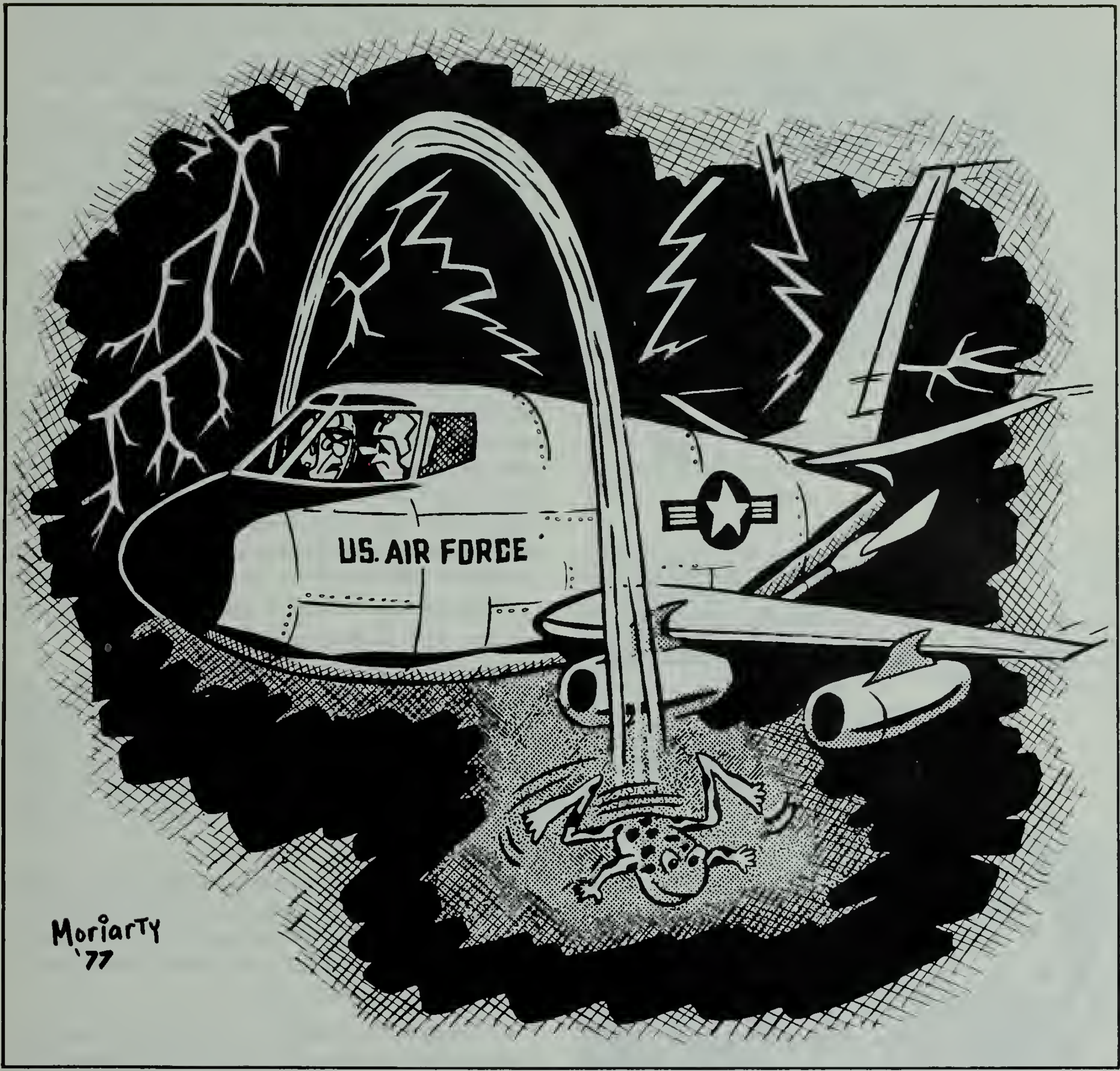
An aircrewman sustained minor burns to his right arm while performing an emergency ground egress. The accident board determined that his flight suit was not sufficiently large and contributed to the extent and degree of burns on his right arm. The pilot involved was a large individual (6 feet, 6 inches tall) who was wearing the largest Nomex flight suit available at his unit. The Nomex material was stretched taut and in direct contact with his skin, rather than having the usual "baggy" fit. The pilot stated that his efforts to obtain specially sized Nomex flight suits had been frustrated because there were no provisions for individual procurement of custom-fitted Nomex flight suits.

Aircrews who cannot be properly fitted with stocklisted size flight suits, or flight suits with approved alterations, may procure custom-fitted Nomex flight suits through their wing equipment management office (EMO). Special measurement requisitioning is covered in AFM 67-1, Vol IV, Part One, Chapter 18, Par 78, and AFLC Control Multiaddress Letter (MCAL), 76-12, 20 April 1976.

Improperly sized personal equipment will not provide aircrews with adequate protection. If you have a need for specially fitted personal equipment, requisition it from your unit EMO now.

WHITE STRIPE

Good news for the tanker and receiver pilots who have supported and long-awaited a white stripe over the "row of rivets" in front of the tanker UHF antenna. The modification is official and in the book, however, you'll need to call your local corrosion control shop to paint the stripe since it is not a TCTO. The authorization and specifications are in "Marking of SAC Aircraft, ADM's and Missile", SACR 66-2, chapter 1, para, 12 a (5). The stripe will make this aid to day refueling training more visible and help out those first few contacts until seeing the big picture becomes easier.



I would suggest you check your altimeter reading as soon as possible!!

HAVE YOU GOT YOUR Priorities STRAIGHT?

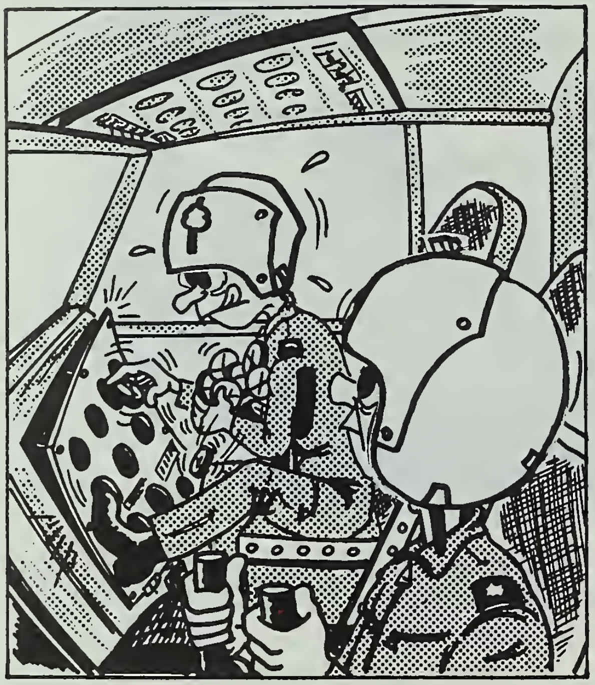
Major Gene B. Ware
CFIC, Chief, Bomber Branch
Carswell AFB

Hey, Uh! Control this Dumbo-22 We are . . . pant. pant . . . experiencing blah . . . blah!!!

When you are experiencing an inflight emergency, what are your first actions? Where do you place your priorities? Have you mentally prepared yourself? Do you have a personal check list to handle emergencies?

In an effort to stimulate discussion and thought on this subject, we have prepared an exercise for you to evaluate your judgement of priorities. As you consider the list of options, you will probably notice that we are attempting to give you a personal check list that may be applied to most of the emergencies that you are likely to encounter throughout your flying career. Situation: You have just experienced a serious inflight emergency. Arrange the following list of actions in order of importance.

____ Call Command Post
____ Accomplish Emergency Bold Print Items
____ Check Heading and Aircraft Attitude
____ Consider Systems Lost
____ Visual Check if Possible, Obtain Crewmember Inputs
____ Accomplish Non Bold Print and Normal Procedures Checklist
____ Check Airspeed
____ Have Coffee, Flight Lunch or a Cigarette if You Desire
____ Advise the Crew
____ Call ATC, Declare an Emergency or Obtain a New Clearance
____ Set Power
____ Cross Check/Monitor Fuel
____ Plan your Landing, Continue the Mission or Perhaps Delay



AIRSPEED, ATTITUDE AND POWER ARE INTERRELATED. YOU MUST HAVE THEM UNDER CONTROL BEFORE YOU CAN AFFORD TO DO ANYTHING ELSE.

The following is our personal checklist arranged in order of importance and the reasons for each step.

1. Check airspeed — Regardless of what has happened, FLY THE MACHINE. You live or die by airspeed. If you don't have airspeed, the rest is academic. Loss of engines, fires, fuel leaks, electrical problems, etc, all are secondary to aircraft control. You need airspeed above stall and above minimum directional control speed, if you are flying a multi engined aircraft. If you are taking-off, airspeed is very important, i.e. acceleration checks, ground directional control speed (multi engine) and flying speed. Airspeed must be considered during a ground abort or a crash landing immediately after take-off. If speed is excessive in a ground abort you may not stop on the hard surface. In a crash landing you must maintain a safe speed above stall so you don't stall the aircraft into the ground. Immediately after takeoff, are you aware of your best climb angle or best rate of climb?

2. Check heading and aircraft attitude — Select a safe flight path in terms of ground track (direction) and altitude above terrain. How will your flight path be affected by reduced thrust? If you have lost thrust, you don't want a wing to get way down or heading to start off in a curve. During departures and low level operations crews must be aware of obstacles and know their emergency safe altitudes.

3. Set power — Set a power setting that will insure a safe airspeed and flight path.

4. Advise the crew — This action puts the crew on watch and directs their attention to saving the airplane and maybe their lives. Survival is now everyone's primary responsibility. Other crewmembers may be utilized for looking up information, monitoring aircraft and position or perhaps reading checklist.

5. Visual check if possible, obtain crewmember inputs — This information could be essential in properly diagnosing the emergency and determining how best to handle the situation. It will help to confirm cockpit indications.

6. Accomplish emergency bold print items — Now that you have your aircraft under control, and have properly diagnosed the problem, you are ready to proceed with the critical action checklist. Something to remember about emergencies is that in most cases, the only fast action required **is to fly the airplane.** (Airspeed, Attitude and Power).

The complexities of most emergencies require a certain amount of analysis before you try to correct them. Fast action without analysis doesn't usually cure problems — it may create more.

7. Accomplish non-bold print and normal procedures checklists — This is the clean up the cockpit phase. You want to do those actions that will prevent a recurrance of the original problem plus additional items that are necessary to insure continued safe flight. Sometimes you might have a tendency here to relax after you have gotten over the initial shock of the emergency and have taken care of the immediate problem. You must continue to monitor the store and police the aircraft i.e., oxygen procedures, pressurization, altimeters, parachute lanyards, etc.

8. Cross check/monitor fuel — Fuel status will have a bearing on your decision to continue the mission, particularly if your original problem was a fuel leak, or resulted in a range degradation. It most certainly has to be considered if a landing is attempted.

9. Consider systems lost — This is the first step in the decision making process, which will determine our actions for the remainder of the flight. Ask yourself how will the loss of a certain system affect the conduct of my flight? What can I expect to encounter later in flight? Do I need this equipment to continue? Example, thunderstorms and no radar.

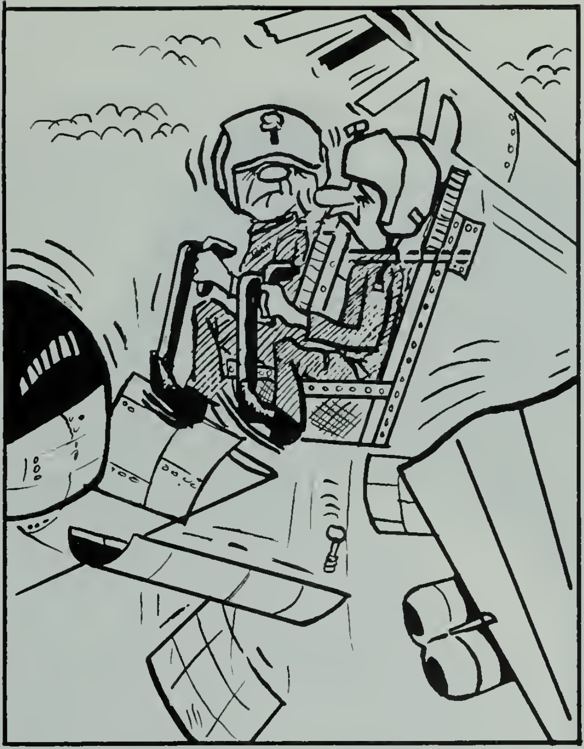
10. Plan your landing, continue the mission, or perhaps delay — A careful analysis of steps 8 and 9, aircraft weight and condition, plus weather and runway conditions should now be considered. Based on these factors, you are now ready to reach for the mike button and announce to the world your decision. What are my options? Don't get in a hurry, plan ahead.

11. Call ATC, declare an emergency or obtain a new clearance — Your problem may not be too serious, in that case you will probably continue as planned. However, if you have elected to abort the mission, you now have the necessary information to be very specific in your desires. Remember this point, if you have a serious emergency, you don't ask ATC, you tell them what you must do to insure the safety of the aircraft and crew. This step could be inserted between 7 & 8 if deviations off course and altitude are in high density traffic but definitely after aircraft control has been established.

12. Call Command Post — If you have gotten this far and the aircraft is still under control and you are having trouble diagnosing your problem, by all means call for help. There are many experts on the ground just waiting to help. This step is required by **SAC Directives.** Commanders must be kept abreast of position and problem areas concerning command and control of their aircraft.

13. Have coffee, flight lunch or a cigarette if you desire — The immediate danger is past. The foreseeable future is secure. It's time to review. Some people may argue that this step should come sooner, and their point is well taken. It has a calming effect that may allow the crew to make more accurate judgments. In any event, relax, you have earned it.

Well, how was your priority list compared with ours. Naturally we expect disagreement. This is always true when crewmembers gather to talk flying. We hope we have generated some thoughts on this subject of handling emergencies.



AIRSPEED, ATTITUDE AND POWER ARE INTERRELATED. YOU MUST HAVE THEM UNDER CONTROL BEFORE YOU CAN AFFORD TO DO ANYTHING ELSE.

The point we are trying to make is that the thought process of handling emergencies can be arranged in some logical order of priorities. These priorities can be arranged in phases.

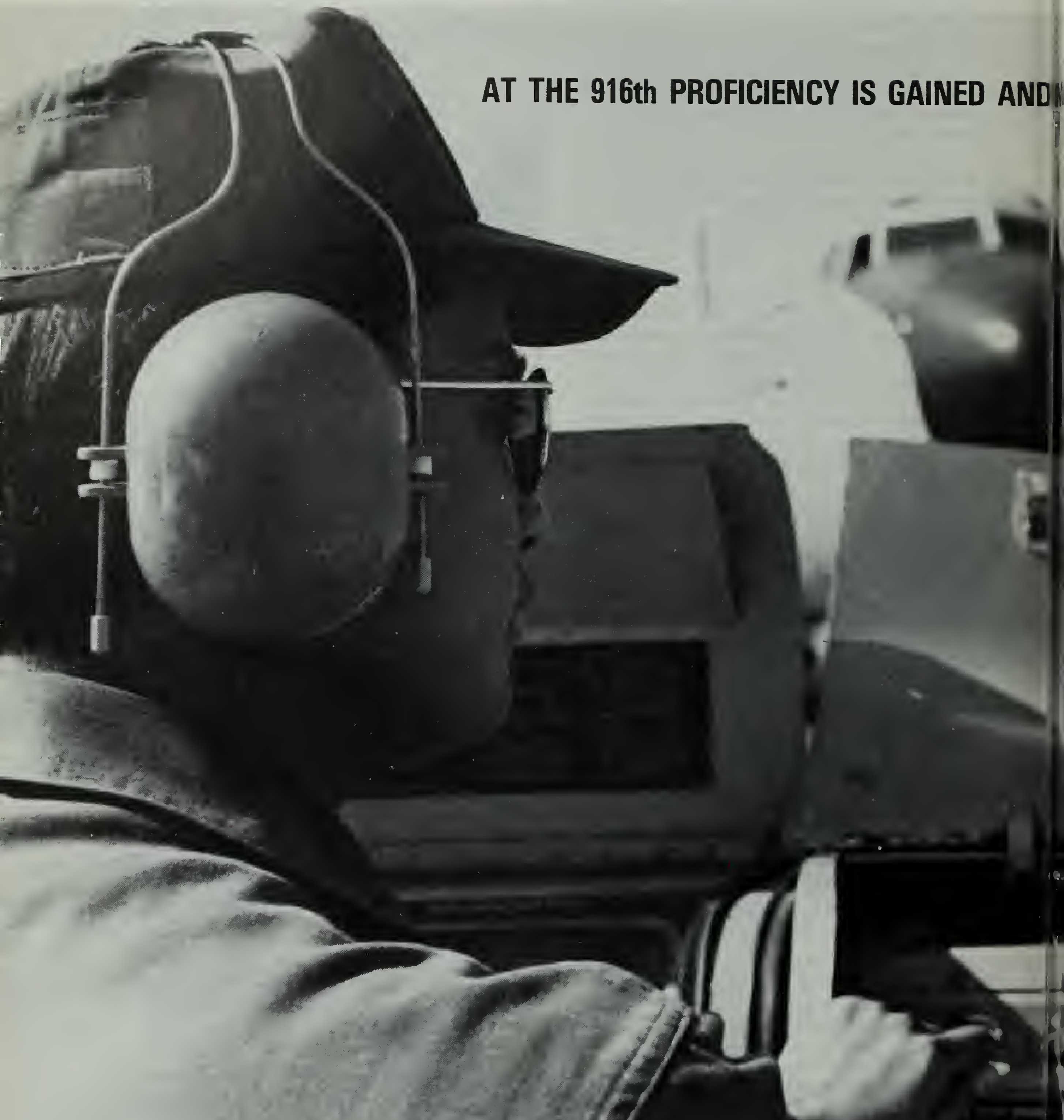
(1) Fly the Airplane Phase
This is first, last and always. If this is not done all the rest doesn't really matter.

(2) Analysis Phase
Considering all factors to determine the best course of action in regard to the emergency.

(3) Decision and Action Phase
Based on information received in analysis phase, the crew takes the necessary actions to make the aircraft safe.

(4) Talk Phase
Advising agencies of intentions or asking for help.

If you don't have your priorities in order, what will be the result? The result will be confusion and distraction, and everyone knows the possible out come. ACCIDENTS!!!



AT THE 916th PROFICIENCY IS GAINED AND

AND AINTAINED . . .

One day at a time

Captain Mike Caldwell
Chief of Safety, 916th AREFS

In 1959, President Eisenhower was finishing his second term, Alan B. Shepard, Jr. was preparing for the first United States manned space launch and the 916th Air Refueling Squadron was organized with a complement of new KC-135s. That same year, many present 916th copilots and navigators were starting kindergarten.

In the intervening 17 years, the 916th logged over 100,000 flying hours, but has yet to count its first aircraft accident. This equates to about six months of SAC's tanker flying hours. The obvious question is how such an enviable record was attained.

Has the 916th had easier missions over the years than other squadrons? No; and the accompanying feature on page 4 of this issue answers that question. Also, remember a good percent of the unit's total time was in the operational refueling of deploying and redeploying B-52 aircraft, a very demanding job. The 916th's record, you can see, is second to none and certainly rules out easy missions.

How about favorable weather? It snows only rarely at Travis AFB; however, the area has some of the country's wettest winters with extremely bad, gusty crosswinds. The Northern California area has a fog season that must be seen to be believed. In fact, tanker aircraft from other units have had weather related accidents on the Travis runway.

Perhaps the 916th has had more experienced crews? Not so. In 1972, this squadron formed the first all-lieutenant crew in 15th Air Force. Today's Travis crews have the lowest average age and experience level of any unit in SAC. But the quality is, and always has been, high.

Most likely the 916th safety record stems from the balance of talent throughout the unit? The 916th maintenance has consistently been

Col Thomas E. Schwietz, Commander of the 916th AREFS.

superior. Maintenance has never failed to handily pass the annual MSET inspection, twice winning the 15th AF MSET trophy. The command post has been formally recognized more than once as the best in SAC. The operations people retired the Colonel Frank Ellis Trophy by winning it three times in a row. Everyone knows that it takes the combined efforts of all agencies in a unit to have that successful a safety program.

But what are the nuts and bolts of this safety program — how is it actually executed? Today's 916th personnel cannot take all credit for attaining the 17-year record, but they can take pride in their methods and success in sustaining it.

The philosophy at the 916th is to first question any proposal's safety aspects. If there is any compromise of safety involved, the proposal is rejected. The only possible exception to this would be EWO, our primary business, for which successful accomplishment is the only standard, regardless of cost. That feeling, however, is not allowed to carry over into any other area of operation.

Our safety program is actually executed by using an appropriate level of supervision and all expertise

Below left to right: A1C Lynn Johnson checking the final "spit shine" Amn Steve Sokol and Amn Gordon Stone are giving one aircraft prior to its Distinguished Citizens Passenger Flight. TSgt Folden Peterson gives an initial job knowledge evaluation on refueling procedures to Amn Daniel Brackett. Capt Dave Johnson debriefs 1Lt Chuck Larson following a standboard evaluation. These evaluations are treated as much as a learning situation as any other training mission. Capt Brad Anderson, SAC Officer Controller, in the Travis Consolidated Command Post.

available. Supervision is used to stop the preventable accident, but is not so suffocating that the crewmember is not allowed to gain the experience of making his own decisions. Oversupervision can negate a training program.

Operationally, the proper balance is achieved by using a very detailed staff review of the mission planning product, but avoiding too frequent inflight observation. Every crew is given the opportunity to frequently fly alone to work out its crew coordination. Of necessity, though, this is followed up with an active no-notice evaluation program. The Director of Operations has instituted a policy of not sending standardization crews TDY. This gives the commander the luxury of being able to give each crew at least one no-notice check a year.

The total expertise available to the squadron is sought out from each section. No one squadron section has a corner on either the training or the safety market. Standboard performs a training function by providing useful information in the Standboard Newsletter. One such newsletter contained cold weather operating tips and a special cold weather preflight checklist. Standboard has also prepared special information cards given to new arrivals. Many experienced aviators have an extra small book with special "cheat sheets" and tricks of the trade in it. These information cards give the new flier the advantage of the same time-tested techniques the "old head" has.

The flight crew section participated in the safety program by publishing a study guide for Dash One warnings, cautions, limits, and emergency procedures. This has improved higher headquarters testing results and has succeeded in raising the crew's general knowledge level of emergency operations. Additionally, the IPU section provides briefings on special interest topics, such as crosswind takeoffs and landings. All of a squadron's best fliers do not work for the DOT; other unit agencies have experienced people that can be utilized.

The impact of our safety program is enhanced by tailoring it to the small group. The "brief all troops" lecture is avoided. Instead, the personal, informal approach is taken. For example, an item on the aircraft commander's mission planning checklist calls for a crew review

Sgt Huprick discusses a problem with Col Grammes, Chief of Maintenance.

Above Left: Sgt Jerome Nordine carries out fuel sump draining procedures. Right: Crew Chief Dave Bernauer, and Aircraft Commander, Capt Wayne Gregg, discuss engine starting emergencies. Below: 1Lt Spurgeon (NAV), Capt Miller (AC), SSgt Dunn (BO), and 1Lt Gesch (CP), Crew R-123 discuss their emergency procedure plan during mission planning.

of emergency procedures. This promotes more discussion and interest than a "stump the dummy" session with the staff, and encourages a crew to preplan its abort and evacuation procedures.

In line with this philosophy, the newcomer's orientation has been prepared as a slide/tape presentation for use with the Caramate II viewer. The new arrival views the presentation in the safety office. Since he can stop the machine at any time, he is more likely to ask questions as they come up. The concept of getting down to the personal level has also been used in the ground safety program with great success.

Every aviator's insurance agent is interested in the quality of his unit's maintenance. 916th maintenance can best be described by two words: consistently superior. For as far back as SAC has MSET records, the 916th has attained a score above the SAC average. In 1972 and 1975, it was awarded the 15th AF MSET trophy for having the highest 15th AF scores during those years. The field maintenance section was named Best in Fifteenth Air Force 1975.

It is no surprise that a maintenance organization that that consistently has good inspections also produces a good product. The 916th traditionally has air abort, inflight engine shutdown, and system reliability rates better than the average. For as far back as there are records, the unit's system reliability rates have exceeded standards in virtually every area. Obviously, a crew that has fewer inflight malfunctions to contend with is less likely to become involved in an accident.

Maintenance is a difficult job at best. Good maintenance is even harder. The maintenance contribution to the safety record has been made by hard working personnel willing to give their job attention to monotonous detail without letting up; it only would have taken one individual to have eased off one time to have caused an aircraft accident. That this has not happened is indicative of the pride and devotion to duty of the 916th maintenance troops.

Copilot Lt Dennis Lischka views slide/tape presentation on Newcomers Safety Briefing as Capt Caldwell looks on.

Obviously, our record has not been sustained by any one individual, action, or office. Just as any one 916th member in the last 17 years could have spoiled the record, so then has each contributed to it. Our task, then, is to do our job, each according to his utmost ability and as safely as possible — just one day at a time, 6205 times!

About the Author

Mike Caldwell is the 916th Air Refueling Squadron chief of safety. He is a 1970 graduate of the University of Illinois, with a B.S. in Aeronautical Engineering. He has completed half the hours requirement for a M.S. in Systems Management from the University of Southern California. Capt Caldwell received his wings at Randolph AFB in 1971. Since that time he has been at Travis AFB as a KC-135 crewmember and now chief of safety.

BIG INSTRUMENT

INSTRUMENT PLANNING

Captain Stephen E. Smaby
1st Combat Evaluation Group
Barksdale AFB

CAUTION

During takeoff, departure, penetration/enroute descent, approach, and landing, the primary responsibility of all crew members is the safe flight of the aircraft. All crew members with adequate equipment will monitor headings, altitudes, and ATC clearances and notify the pilot of any deviation. The navigator will write down all altitude and heading clearances and be prepared to provide the pilot with this information when requested. Any crew function which is extraneous to these phases of flight will not be accomplished.

This "bogus" caution was created to emphasize the importance of safely accomplishing instrument flight. The points stressed in this caution have been repeated over and over again. This article will discuss how to enhance your chances of safe flight during instrument maneuvers through detailed planning.

By the time you become a pilot in SAC, you should be knowledgeable of instrument procedures. Therefore, this article won't explain each instrument maneuver, but will be limited to *some* planning considerations that could help make flying instruments easier. In other words, put the polish on the brass. It will not be an exhaustive discussion of every possible technique, rather it is intended to open the door to further creative thinking on your part.

The logical place to begin is with the planning documents. The FLIP documents provide a large amount of information. The SID, approach plates, FLIP general planning, and the Enroute Supplement are essential for all flight planning. Besides providing the routes and altitudes necessary to fly the instrument maneuvers, they also contain information on compliance with ATC clearance, no-notam maintenance schedules for radio-navigation aids, special notices, non-standard airfield lighting information, etc. AFR 60-16 with SAC Sup 1, and AFM 51-37 should complete the basic documents needed. You may need other documents depending on the nature of the mission. Though each one of these documents need not be reviewed extensively every time you are mission planning, the information contained in them should be reviewed as necessary.

Once you have determined what documents you are going to use, you need to analyze the mission and plan the individual phases. The instrument takeoff and departure are the first instrument maneuvers which should concern you. Whether you plan to fly a SID or follow radar vectors from departure control, this is the time to compare the departure course with the approach plate; noting the obstructions, minimum and emergency safe altitudes, and the minimum climb rates. This will save you time on the departure briefing just before takeoff.

If you are planning a SID, you can compute lead points for radial to arc, radial to radial, etc., eliminating the need for mental gymnastics and possible errors during flight. In other words, "think through" the departure before you fly it. It will amaze you how simple a "complex looking" SID will become. After you've got a handle on the departure, consider some variables that could occur and how you will adjust for them. For example, what will your actions be if you receive radar vectors while you are on a SID? AFM 51-37 and FLIP General Planning provide some of the answers; however, the time to review this situation is on the ground, before it happens in the air.

Once you are airborne, you will eventually be faced with the problem of making the descent. There are two types of descent: the enroute descent and the published penetration. For either type it is important to review a terrain map for prominent obstacles and general terrain elevation. Next, consider the navigation aids to be used and determine their location in relationship to the airfield. It is also important to review the Enroute Supplement for no-notam maintenance and usable range and area for the navigation aids, to determine what facilities will be available for use. Finally, you should review the emergency and minimum safe altitudes and minimum sector altitude (for low altitude approaches) if they are different from the ones for departure.

Once you have developed this overview of the letdown area you are ready to consider the penetration and instrument approaches. In planning for the enroute descent you should consider where you would like to start your descent, so that you will be prepared for a descent "at pilots discretion." It is even more important to consider the last possible point on your arrival route that you can start a descent from cruise altitude so as to arrive at the final approach altitude prior to the final approach fix. Also, determine the rate of descent required. What if you don't receive clearance to descend by this time? Review what you are going to do in this case; i.e. extended pattern, a descending 360° turn, etc. It is at this time that you may want to consider which penetration and approach you plan to fly if you lose communication with approach control while in IMC.

This brings us to the review of the published penetration. While you review the heading and altitudes on the approach plate, you can accomplish computation for lead points and rates of descent. It may be possible to compute a no-wind rate of descent that will allow a continuous descent from the IAF to FAF altitude without leveling off at the intermediate "at or above" altitudes. It is little computations like this that can simplify the penetration immensely. Also, don't forget to review the cautions and notes published on some approaches.

After the penetration, you will be ready to plan the final approach. Besides the normal procedures you use to fly the approach, there are some computations you can make for non-precision approaches that can assist you. You can compute the last possible point you can safely complete a landing from a non-precision approach, which is not necessarily the missed approach point (See IFC article in May 1976 Aerospace Safety). You can also figure the approximate timing information for VOR, TACAN or "localizer only" approaches, possibly saving a mental error in flight. Finally, consider the procedures you will use to transition to the published missed approach.

Assuming you intend to land, you are now faced with transitioning from instrument flight to a visual approach. During the planning phase consider and discuss your procedures with your copilot. AFM 51-37 suggests some procedures that can be used. An important factor in making this transition during IMC conditions is being able to recognize the runway environment. Therefore, it is important to study the runway lighting and airfield layout. The Aerodrome/Facility Directory of the Enroute Supplement may also contain important remarks about the approach and runway environment such as nonstandard runway lighting, obstructions, and the lack of coincidence of the VASI with a precision approach glide slope.

Next you want to consider the sequence in which you will accomplish any subsequent approaches. If the copilot knows what approach you intend to fly next, you will be able to eliminate some unnecessary interphone and radio conversation. Also, the navigator can be ready with the MDA or DH information. This results in smoother coordination and less distractions.

This brings us to the final step in the instrument planning — coordinating your plan with the other crew members. The Dash I thoroughly covers this area; therefore, there is no need to repeat it here. However, it is important during this coordination to emphasize the use of EVS (for B-52s), terrain maps, FLIP documents, radar altimeter, and airborne radar. You should also clarify what you expect from each crew member during departure and approaches. For example, you may want to designate the navigator to determine the timing required for a VOR, TACAN or localizer only approach. Also include the navigator(s) in the planning of emergency procedures. Let them know at what altitude you plan to go around. Discussion of alternate plans of action due to changes in weather, missions or some other factor is also very important. Involve all of your crew members in the instrument planning and clearly define what you expect from each of them.

It is not possible to cover every planning consideration in a short article. Rather, this discussion is intended to provide some information and a few considerations of the many variables and general aspects of instrument planning. The amount of time and effort required depends on how many times the departure and approaches have been flown and your familiarity with the airfield. The important point of this article is to encourage you to mentally prepare yourself and your crew for instrument flight. Once you have hangar flown your flight with all its variables, the actual mission will be much smoother and more coordinated.

EXPERIENCE FOR SALE

Capt. William A. Dunnaway
43 SW, Andersen AFB

And safety is but a word I heard,
When they awoke me from my nap.
I smiled to myself,
For I'd slept through the crap.
I didn't hear the near miss,
Or the glide slope being down.
The PAR had crumpted again,
But I had slept so sound.
Arriving late at base ops,
I said, "Check the notams Co.
But first get me a SID, help the gunner
with the water jugs, get the seat packs,
check the 207, recompute the takeoff data,
get me a sandwich and a coke.
And hurry, we've got to go!
We took off late and missed our tank,
But we had gas to spare.
We were climbing from low level
When the co-pilot found his error.
"EIGHTEEN THOUSAND POUNDS", I calmly said,
"Well, I'll tell you what we'll do,
We had planned high fix with fifty thou,
But we'll press on with thirty-two."
We called and got the weather
When out a hundred miles or so,
— 500 and a quarter mile,
With light and blowing snow.

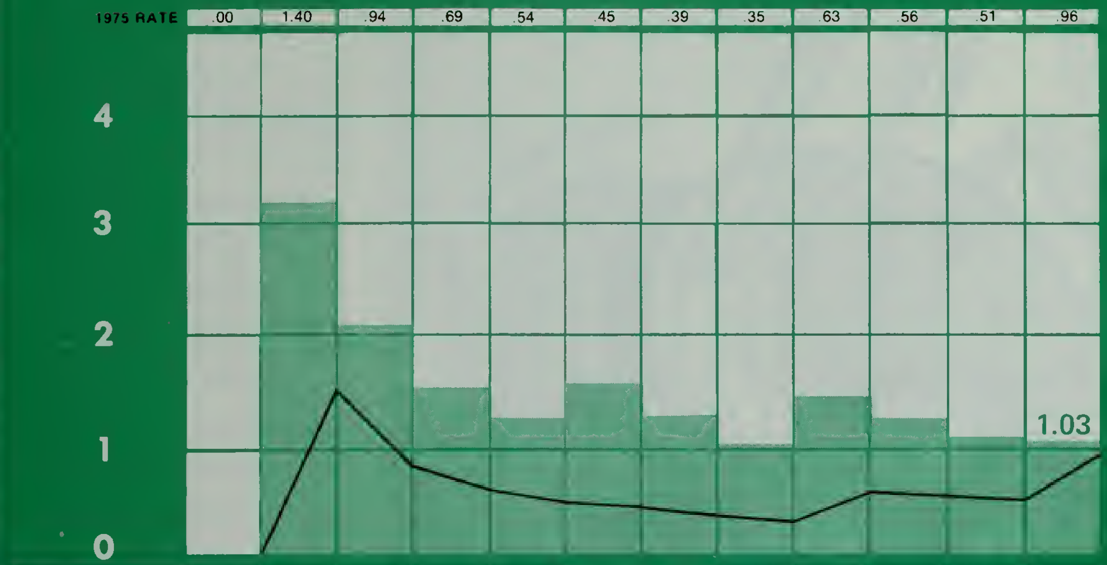
At fifty miles they told us
That our alternates had crumpted.
I requested vectors to the ILS.
As my heartbeat missed a thump.
But those idiot bars were centered
And I was just about to brag,
When I heard, "Oh Damn,
Course and glideslope flags,"
Trained SAC killer,
Stable and steely eyed,
I calmly pressed the mike button,
"PAR!" I CRIED.
"I'm sorry," replied the controler,
(His voice had not a care)
"The PAR is notamed out.
The glideslope's off the air."
My life flashed before me,
A thousand thoughts raced through my head.
The Co pushed the power forward,
"GO AROUND! YOU FOOL," he said.
Recomposed, I took the airplane,
"Gear up, we're going around"
To which the Co replied
"Sorry Ace, gear's hung down"
My mind raced like a steamship,
Without rudder knowing not which way to go.
"Request vectors to Podunk air base —"
"But with what fuel?" asked the Co.
"Control, we are emergency fuel"
Was my final thought to try.
And then the usual helpful phrase,
"This is Control, please standby."
And with no other recourse,
The Co began to tighten his chute.
There was little discussion over interphone,
The bailout signal he did not refute.

I do not like to remember
Hanging in my chute.
I do not like to inspect each day,
The latrines here at Chanute.

"AFTER THE EVENT EVEN A FOOL IS WISE"
—Homer

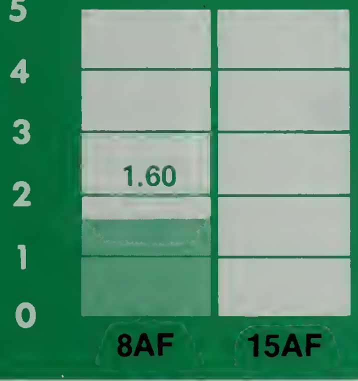
1976 Flying Safety Rate

SAC MAJOR ACCIDENT RATE (PER 100,000 FLYING HRS)



ACCIDENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1975	0	1	0	0	0	0	0	0	1	0	0	2
1976	0	2	0	0	0	1	0	0	1	0	0	0

1976 SUBORDINATE CMD RATES

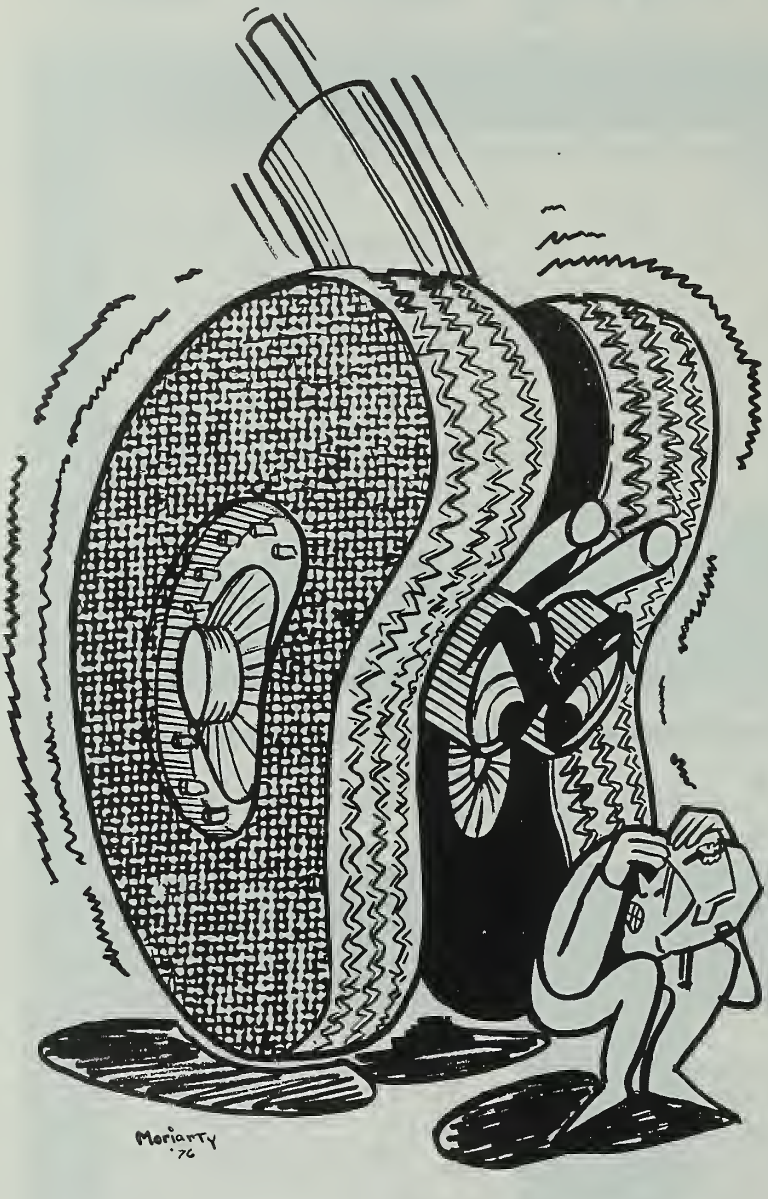


ACCIDENT STATUS

KC-135	FEB 76
FB-111	FEB 76
FB-111	JUN 76
KC-135	SEP 76

LEGEND ⌃ =1975 RATE

OPS HAZARDS



BEWARE OF HOT BRAKES

While completing a taxi-back landing, the pilot tested the brakes at 90 knots and again initiated braking at 50 knots to slow the aircraft to a safe speed for turning off the runway. The pilot continued to taxi south on the parallel taxiway. During this time, all eight engines were at idle and the gross weight was 215,000 pounds. While taxiing, the aircraft tended to accelerate, so the pilot had to apply the brakes at least three times to keep the aircraft speed down.

After taxiing 9600 feet, the aircraft stopped at the south entrance to the SAC parking ramp, and the pilot set the brakes. Maintenance met the aircraft, established ground communications and informed the pilot the front trucks were chocked and brakes checked okay. This was in accordance with local directives. The pilot then changed seats with another pilot.

The aircraft had been stopped ten minutes when the pilot released brakes and began taxiing to the active runway. He noted that the brakes held initially but then felt them release as power was applied. He asked the SOF to come and look them over. The aircraft taxied 600 feet when the crew heard a bang. The pilot stopped the aircraft and called for maintenance. Maintenance investigation revealed the number three tire had blown and the the hydraulic and electrical systems checked normal. Review of maintenance forms indicated the wheel and tire shop conducted a routine tire inspection five days prior to this incident and found no defects. Maintenance personnel removed the tire and found a worn spot where the blowout occurred. The rest of the tire tread was good.

According to the brake energy charts. The brake heat energy absorbed during this incident was in the normal range. The B-52H has a tendency to accelerate at idle power on eight engines especially during the winter months at light gross weights. Since peak heat energy buildup is delayed, it normally is not attained until approximately 15 minutes after the aircraft has cleared the runway. This is roughly the time when the crew could be setting the brakes during taxiback landings. As the brakes are set and as the heat energy builds to its peak, the brakes tend to fuse. Normally, depending on the heat energy limit reached, the brakes can be broken loose. In this case, the number three brake did not break loose which caused the tire to drag on the taxiway until it blew out.

This is certainly not a new problem. If you have never had it happen to you, talk to some of your old head pilots about it. The implications could be much worse than a blown tire on taxi out (dragging brake on takeoff, wheel fire after subsequent takeoff, etc.).

THAT EXTRA SET OF EYES

After completion of a touch and go landing, the crew requested another closed pattern with a touch and go. They were cleared for the touch and go and while turning to crosswind, tower advised that the runway would be closed for 15 minutes to allow some work on the runway. The crew then requested clearance to go to Ontario Approach Control and tower approved.

Prior to establishing contact with Ontario, the extra pilot in the jump seat called traffic at 12 o'clock. The aircraft commander looked up just as a light aircraft crossed over their flight path. The pilot estimated the Cessna was 300 feet above their level as the -135 passed directly below. The tanker was in a climb passing 2900 feet. The pilot rolled wings level and leveled off. The light aircraft was then at the 9 o'clock position at the same altitude. The pilot called Ontario Approach and asked if they had any traffic. Approach controller reported the traffic was not under his control. Ontario asked why the tanker was not heading 260 degrees and the pilot replied that he had taken evasive action to avoid traffic. The pilot said nothing more to Ontario because the controller was saturated with traffic at the time.

The pilot called the command post, described the aircraft and said he appeared to be heading into Riverside Municipal airport. The command post called Riverside tower and received the identification of an aircraft of similar description which landed a few minutes after this near miss.

The light aircraft was in the March AFB control zone without radio contact and permission of March AFB tower. Tower personnel did not see the light aircraft. The pilot in the light aircraft was apparently disoriented. The Cessna was on a VFR flight plan not utilizing Stage III Radar services and Ontario Approach Control was not in contact with him.

This incident emphasizes the importance of that extra set of eyes in the cockpit. When flying near high density traffic areas, and at any other time, it is imperative that you utilize all available aids for traffic advisories to the maximum extent possible.

HOW DO YOU SET YOUR BEACON?

Two crewmembers avoided a cold night in the woods because other aircraft were flying in the vicinity of their downed aircraft. The smoke cloud from the crash site was spotted by the other aircraft and was used to direct the rescue operation.

The problem was that neither crewmember had his survival beacon set in the automatic position as required by the tech order. This could have made rescue operations extremely difficult or at least much more time consuming if other aircraft were not in the area.

Do you insure your beacon is in the correct position during preflight and when required by your checklist?

PROFESSIONAL PERFORMERS

Individuals selected for these pages as SAC's top professional performers of the month are chosen from nominations made by all SAC units. Selection is made only after all nominations have been carefully screened and those chosen meet the highest standards of excellence as outlined in SACR 127-2.

Maintenance Man. SSgt Russell Lighter, 916th Air Refueling Squadron, Travis

FLYING Crew S-03, 449 Bombardment Wing, Kincheloe AFB: (L-R) Capt Leland H. Plowman, pilot; SSgt Terrance J. Hughson, gunner; 1Lt Thomas J. Gilmer, copilot; 1Lt James L. Frey, Nav; Capt Marc J. Dinerstein, RN. Not pictured is Capt Carl S. Guinsler, EWO.

MINUTEMAN Crew E-055, 44th Strategic Missile Wing, Ellsworth AFB: MCCC Captain Brian A. Erickson, and DMCCC 2Lt Burgess D. Grubbs.

TITAN Crew R-031, 390th Strategic Missile Wing, Davis-Monthan AFB: MCCC Capt Deas H. Warley, III, DMCCC 2Lt Herman C. Ellis, MSAT Sgt David S. Peterson, BMFT A1C John M. Jenkins.

HALL OF FAME

TACTICAL FLYING

OVER EIGHTEEN YEARS	
157 AREFG, Pease (NHANG)	Jun '58
OVER SEVENTEEN YEARS	
940 AREFG, Mather (USAFR)	May '59
916 AREFS, Travis	Sep '59
OVER SIXTEEN YEARS	
97 BMW, Blytheville	Mar '60
19 BMW, Robins	Oct '60
OVER FIFTEEN YEARS	
151 AREFG, Salt Lake City (UTANG)	Feb '61
161 AREFG, Sky Harbor (AZANG)	Apr '61
126 AREFW, Chicago O'Hare (ILANG)	Apr '61
134 AREFG, McGhee Tyson (TNANG)	Aug '61
OVER FOURTEEN YEARS	
11 AREFS, Altus	Feb '62
301 AREFW, Rickenbacker	Jul '62
96 BMW, Dyess	Aug '62
449 BMW, Kincheloe	Aug '62
OVER TWELVE YEARS	
160 AREFG, Rickenbacker (OHANG)	Dec '64
OVER ELEVEN YEARS	
136 AREFW, Dallas NAS (TXANG)	Jun '65
320 BMW, Mather	Jul '65
OVER TEN YEARS	
452 AREFW, March (USAFR)	Sep '66
OVER NINE YEARS	
92 BMW, Fairchild	Feb '67
171 AREFW, Greater Pittsburgh (PAANG)	Jun '67
55 SRW, Offutt	Jul '67
2 BMW, Barksdale	Aug '67
319 BMW, Grand Forks	Dec '67
OVER EIGHT YEARS	
22 BMW, March	Feb '68
128 AREFG, Gen Mitchell (WIANG)	Jan '69
OVER SEVEN YEARS	
5 BMW, Minot	Feb '69
42 BMW, Loring	Sep '69
93 BMW, Castle	Oct '69
141 AREFW, Fairchild (WAANG)	Oct '69
OVER SIX YEARS	
28 BMW, Ellsworth	May '70
OVER FOUR YEARS	
7 BMW, Carswell	Mar '72
101 AREFW, Bangor (MEANG)	Mar '72
416 BMW, Griffiss	May '72
305 AREFW, Grissom	Aug '72
376 SW, Kadena	Nov '72

ICBM

OVER THIRTEEN YEARS	
381 SMW, McConnell	Nov '63
OVER TWELVE YEARS	
90 SMW, F E Warren	Jul '64
1 STRAD, Vandenberg	Sep '64
OVER ELEVEN YEARS	
308 SMW, Little Rock	Aug '65
OVER SIX YEARS	
341 SMW, Malmstrom	Apr '70

To gain listing in the Hall of Fame, a SAC or ARF unit must be accident-free for 48 months.

SAC SAFETY SCREEN

2 BMW, Barksdale Crew E-61: P Maj George P Cole Jr, CP 1Lt Joe B Psalmonds Jr, RN 1Lt Henry B Kintner, N Capt Donald J Perrero, EWO Maj James H LaFon, G SSgt Robert B Ellis III

42 BMW, Loring Crew E-167: P Capt James M Sanders, CP 1Lt Homer R Gordon II, N Capt Douglas D Day, BO Sgt John C Wright

42 BMW, Loring Crew E-110: 1P Capt Kenneth L McKibban, CP 1Lt Dale E Frost, CP 1Lt James W Hunt, N 1Lt Mark H Hall, BO SSgt Bobby E Langston

42 BMW, Loring Crew E-13: P Capt Daniel T Fucci, CP 1Lt William J Casement, RN Capt Craig J Herman, N 1Lt Franklin D Sexton, EWO Capt Joseph S Tartaglia, G Sgt Robert L Drake

91 SMW, Minot Crew R-007: MCCC Capt Robert L Demuth, DMCCC 2Lt Gary L Bledsoe

308 SMW, Little Rock Crew R-062: MCCC 1Lt Gary S Houp, DMCCC 2Lt William A Hansche, MSAT A1C Frederick M Allen, MFT A1C David W Hudgins

321 SMW, Grand Forks Crew E-146: MCCC Capt Gerald N Maher Jr, DMCCC 1Lt Charles E Howard

341 SMW, Malmstrom Crew S-121: MCCC Capt Robert D Wilson, DMCCC 1Lt James J Cwiak

381 SMW, McConnell Crew R-061: MCCC Capt Carle Hall, DMCCC 2Lt Louis H Schweichler, BMAT A1C James K Purucker, MFT A1C John F Dugan

410 BMW, K I Sawyer Crew S-103: P Capt Thomas L Dillard, CP Capt Thomas T Boehm, N Capt Ronald C Slyter, BO MSgt Philip O Wangsness

416 BMW, Griffiss Crew S-103: P Capt James R Maurer, CP 1Lt Kyle C Bond, N Capt Gary D Trende, BO SSgt Timothy W Towne

509 BMW, Pease Crew S-12: P Capt Lawrence Hanfland, N 1Lt William Bereza

The SAC Safety Screen is an honor roll of SAC's most professional crews. To gain listing on the Screen, crew members must be nominated by their unit commanders and meet high selection criteria of experience in their aircraft or missile system *IAW SACR 127-2.*

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FLARE

SR-71 RECORDS MADE OFFICIAL

In the October 1976 issue of Combat Crew, we featured the aviation record attempts of SR-71 crews from Beale. Seven world records have now been officially recognized by the Federation Aeronautique Internationale (FAI).

World class records were certified for speed over a 15/25 kilometer straight course (2,193.64 miles per hour), speed over a 1,000 kilometer closed circuit (2,092.29 m.p.h.), speed over a 1,000 closed circuit with 1,000 kilogram payload (2,092.29 m.p.h.) and altitude in horizontal flight (85,069 feet).

The SR-71 performances also set world absolute records for speed over a straight course, speed over a closed circuit and altitude in horizontal flight.

The records for speed over a closed circuit were previously held by a USSR MIG-25 Foxbat. Speed over a straight course and altitude in horizontal flight records were previously held by the YF-12A prototype sistership of the SR-71.